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U.S. Office of
Inter-American Affairs

Bolivia, storehouse of
metals

[Washington]

[1944?]

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Bolivia

Storehouse of Metals



BOLIVIA

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FROM HER MINES high on the "roof of the world", Bolivia, who declared war on the Axis in 1943, brings tin to the production lines of the United Nations. She brings other strategic materials too—tungsten, antimony, petroleum, zinc, lead, copper, bismuth, mica, rubber, hardwoods, and cinchona.

Yet to get these materials to their destination is a major problem in transportation. For Bolivia is surrounded by spectacularly high mountains, tropical jungles, and virtually uninhabited plains. To reach the Pacific or the Atlantic, cargoes must travel west through Peru or Chile or east through Argentina or Brazil. Engineers and road crews have been increasing Bolivian railroad facilities, and building international connecting links with existing neighboring railroads. Axis controlled air lines have been nationalized and air transport is being augmented, with new landing fields to tie in Bolivia's growing airlines with those of her neighbors.

Bolivia had broken with the Axis in January, 1942, and had cooperated with the other American republics in carrying out the provisions of the Rio de Janeiro charter. Nazi and Japanese fifth columnists were expelled, and enemy alien businesses taken over.

On the map, Bolivia is a tropical country, but not even a relief map adequately suggests the range of Bolivia's climate. While there are jungles and low, dry plains with typically torrid heat in the eastern two-thirds of Bolivia, few of her 3,500,000 people live here. For the most part, they are concentrated in the *Altiplano*, 2 miles or so above sea level, some-

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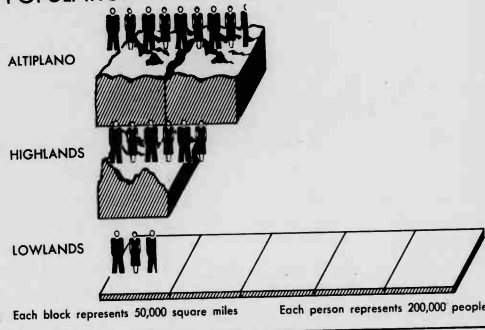
times beyond the timber line, at other times in more sheltered valleys. No-where in the world, except in Tibet, does the main life of a country go on at such great heights, and Tibet's high plateau

is much more sparsely populated than Bolivia's. La Paz, the seat of government, is, like "Shangri-La," deep in a valley which protects it from the winds that blow off three snow-capped, awe-inspiring peaks of the Andes. Yet La Paz lies at 12,000 feet above the sea.

The shores of Lake Titicaca on the boundary between Peru and Bolivia have known civilization for at least 2,000 years. When in the twelfth century the Incas established their Empire of the Sun at the western end of Titicaca, 12,500 feet above the sea, they found at Tiahuanaco the ruins of a well developed communal, theocratic state now estimated to have been established as early as 200 A. D., and to have reached its heyday in 900 A. D. Throughout modern Bolivia are to be found the ruined aqueducts, moldering agricultural terraces, and crumbling stone roads of the more recent Incas, who had a telegraphic system and were master engineers, but did not know the wheel.

The Spanish *conquistadores*, pushing down from Panama and inland through Peru in search of a rumored fabulous mountain of silver, actually found it in 1545—one of the few instances in history that turned legend into fact. Rising above the Potosí of today, it was dubbed the *Cerro Rico* (Rich Hill), and has lived up to its name by producing to date a billion ounces of silver. Not only did the *Cerro Rico* help finance Spain's

POPULATION AND AREA



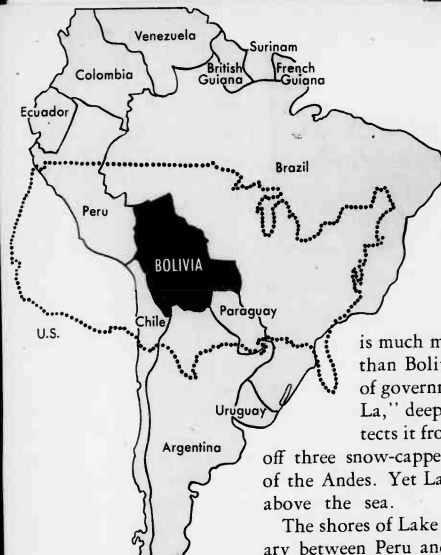
later conquests and her European wars, but with silver falling off, it yields the all-important tin of today.

During the search, Bolivia's first town, Paria (near the modern city of Oruro), was founded in 1535 by the usual early Spanish assortment of soldiers, herdsman, and miscellaneous adventurers. Three years later another group established Charcas, "City of the Four Names," which was to be, in turn, La Plata, Chuquisaca, and Sucre, legal capital of Bolivia. La Paz, near the end of Titicaca, was founded soon afterwards.

Adventurers from Spain flocked to Potosí, which became a typical silver-rush city, where fortunes were made and lost overnight. The Aymaras and Quechuas, subjects of the Incas, were forced to work in the mines, and many of them died from the unaccustomed pressure of the labor and from diseases introduced by the whites. Spaniards often married Incan princesses, but the remaining descendants of the Aymaras and the



INTENTIONAL SECOND EXPOSURE



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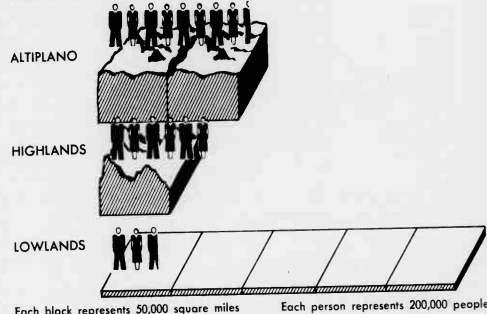
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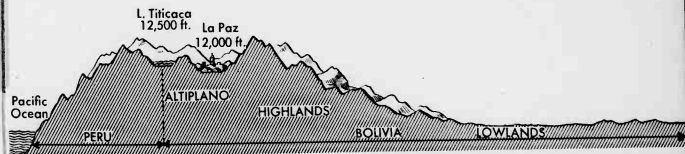
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Quechuas still work the mines, and when they can, till their few acres, but seldom remember the glory that was Tiahuanaco and Cuzco.

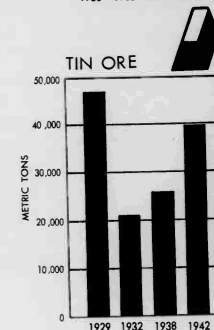
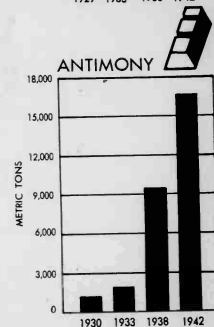
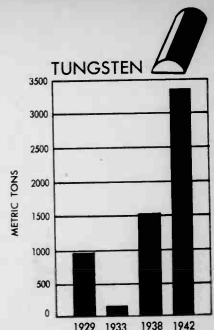
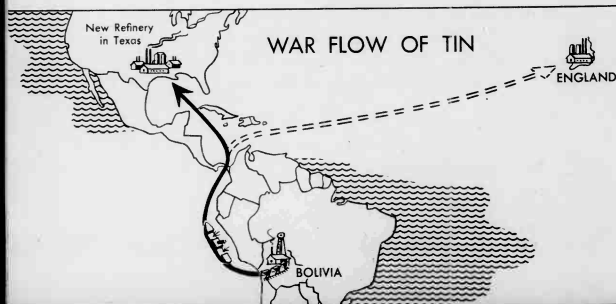
They did not accept their serfdom under the Spaniards with complete apathy. Indian and *Mestizo* rebellions were common, but usually futile, during colonial days. As early as 1661, Antonio Gallardo, with a banner of "Liberty for the Americans," broke into the palace and killed the governor. There was another major revolt in 1730, and in 1780 the Indian, Julian Aposo, entered La Paz with a powerful force and was driven out; then, for 109 days and later for 75, laid siege to the city and was only conquered by a force of 7,000 crack Spanish soldiers sent up from Lima, center of Spanish colonial rule.

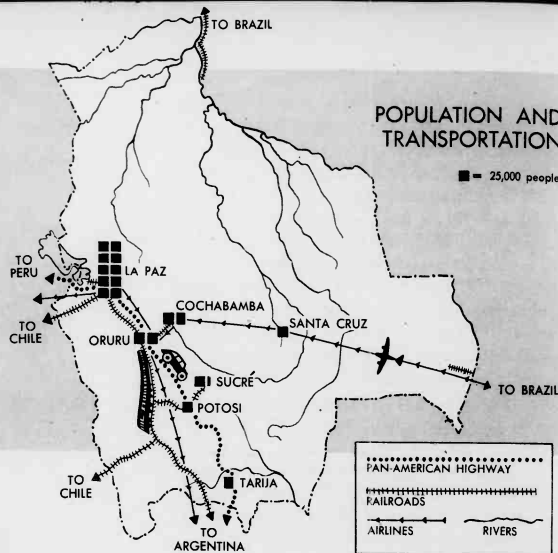
A Bolivian, Pedro Domingo Murillo, was the first to declare independence in South America, but Bolivia was next to the last of the Spanish colonies on the continent actually to be freed. On May 25, 1809, a group of colonists deposed the

Spanish authorities and in July at La Paz, Murillo declared the independence of the country. The revolt was crushed and Murillo executed, but before his death, said, "No one will be able to extinguish the torch which I have lighted."

Not until 1825, when the converging forces of Simón Bolívar from the north and José de San Martín from the south had declared the rest of South America independent, was Bolivia at last liberated. Even after the decisive battle of Ayacucho in 1824, when Bolívar's forces under the command of General Antonio José de Sucre defeated the Viceroy of Peru, there was sporadic fighting in Bolivia. On August 6, 1825, a junta of delegates from the various provinces declared their independence, and on August 11, christened the new state the República Bolívar with Bolívar president and Sucre as supreme ruler in his absence.

Bolívar was able to spend a few months in the new nation which bore his name, but on May 26, 1826, he turned the government over to Sucre. Bolívar, however, drafted the first constitution in which he outlined his theories of government. Among the unusual features he proposed was a President for life to be chosen by a Congress with three houses—Tribunes, Senators, and Censors. After some changes, the Constitution was adopted, and later that year Sucre was elected president. Sucre, deeply hurt at revolts against his authority which culminated in an attack from the army during which his arm was shattered, resigned, and in a farewell message to the Assembly begged that they "preserve amid every peril the independence of Bolivia."





After a few years of anarchy, another of Bolívar's generals, Andrés Santa Cruz, assumed power in 1829. During his administration, numerous legislative and social reforms were initiated, and the Universities of La Paz and Cochabamba were established to supplement the University of St. Francis Xavier, one of the oldest in the Americas (founded at Charcas in 1624). Santa Cruz tried to enforce a confederation of Peru and Bolivia, which lasted only from 1836 to 1839, when it disintegrated under pressure from Chile and Argentina.

During the next hundred years, Bolivia was to lose many of her sons, two-thirds of her original territory, and her access to the Pacific in a series of wars with her neighbors. In 1879 the "War of the Pacific" broke out over disputed boundary lines between Chile and Peru and Bolivia. Fighting stopped in 1884, but final settlement of this three-cornered dispute was

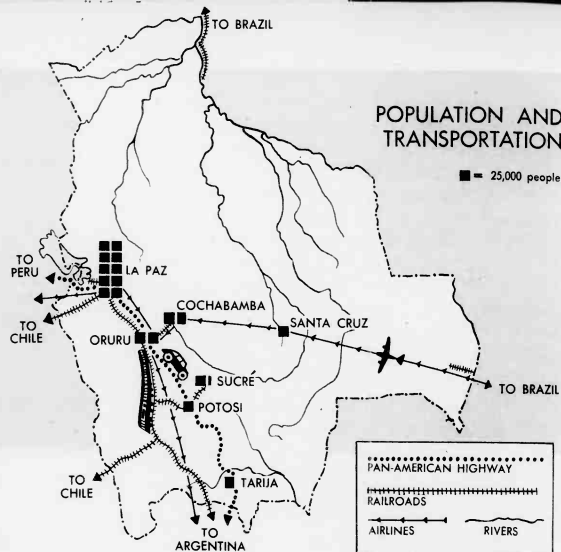
not made until 1904, and Bolivia is still hoping for an outlet to the sea. Debilitating from the economic as well as the manpower and territorial standpoints was the more recent Chaco War with Paraguay over the lush lowlands to the east, for years held jointly by the two nations. The settlement in 1938 gave most of this to Paraguay. Much of this Chaco region had already been lost to Brazil and Argentina.

During the first 75 years of her existence, Bolivia had a succession of dictators, with consequently little internal peace or opportunity for development. The liberal president, Ismael Montes, who took office in 1904, encouraged railroad building and the development of mines. The Constitution of 1938 laid the foundation for further development, although Bolivia's problems are still many and still largely to be solved.

Modern Bolivia is more than half Indian. The preconquest languages are still heard in the streets of her cities, and the



INTENTIONAL SECOND EXPOSURE



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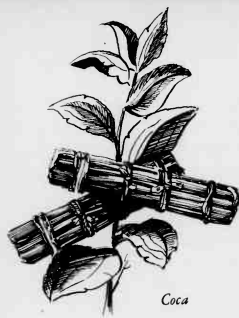
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Coca

wool cap with its two earflaps, the bright, beautifully woven but well worn poncho of the Indian men and the full gay skirts of the women strike a colorful note against her imposing colonial buildings and her modern office structures.

While the laboring Indian of modern Bolivia knows but dimly his glorious past, he does cherish his inherited love of the land, as well as the ancient methods of its cultivation. He clings when possible, to the ancient communal lands, and to his own particular *chaya*, his house and tiny garden set off from the rest of the *hacienda* by its own wall. Bolivians remain adept at the beautiful handiwork and the arts of their ancestors. The pottery and handwrought silver are especially interesting as are the skillfully woven articles of alpaca and llama wool in bright colors and attractive as well as original patterns.

Inborn love of the soil plus the fact that there is still much undeveloped land, particularly in the east, could make Bolivia a strong agricultural nation. Even today, two-thirds of her people depend upon the land for their livelihood, although for generations the riches of her mines have overshadowed agriculture in her national economy. While there are comprehensive governmental plans under way for agricultural development and an Agricultural Bank of Bolivia, she still has to import much of her food, and this, like her metals, is subject to transportation difficulties, plus fairly high import duties.

Greatest potentialities perhaps lie on the eastern side of the Andes, where generally there is ample rainfall. Coca, from which cocaine is made, is the most important crop of these valleys, but cotton, corn, coffee, cacao,



The llama

HISTORY OF BOLIVIA

200-900	1100	1525	1550	1575	1600	1625
Pre-Inca civilization of Tiahuanaco	1100-1535 Inca Empire	1535 Potosi Silver mines founded from Peru	1545 Silver mines at Potosi opened	1559 Audiencia of Charcas established		
						1626 Flood at Potosi silver mines
						1650
						1675
						1661 Rebellion led by Antonio Gollardo
						1700
						1725
						1730 Revolt against Spain
						1750
						1775
						1781 Indian revolt, Siege of La Paz
						1800
						1809 Independence movement led by Murtillo
						1825
						1809-25 War for Independence
						1825 Republic of Bolivar proclaimed
						1836-39 Bolivia and Peru in Federation
						1850
						1866 Loss of territory to Chile
						1875
						1879-84 War of the Pacific. Loss of access to sea
						1900
						1903 Loss of territory to Brazil
						1917 Relations with Germany severed
						1925
						1921-25 Oil production begins
						1932-35 Chaco war with Paraguay
						1930
						1943 War against Axis

beans, and sugarcane also are grown. Toward the Amazon, in the provinces of Beni and Santa Cruz are the tropical forests that produce rubber, cinchona (which the war's need for quinine has greatly stimulated), dyewoods, and mahogany. This area ranks next to the *altiplano* in population and economic importance, but full development awaits better transportation. In utilizing the rich forest products of the Beni and the oil which is known to exist, transportation and tropical health measures are the key.

The rubber center, Guayaramerin, is again busy. Its airport, hacked out of jungle and filled in over swamps, is being improved, and from the city go medical and sanitary experts to improve the health of the rubber tappers.

Manufacturing is in the early stages of development, with governmental aid in making Bolivia more nearly self-sufficient in consumer goods. Her 11,000 industrial workers produce textiles, flour, cement, cigarettes, clothing, earthenware, and processed foods.

All these, however, are subordinated to the riches which come from under the soil. Today, with Malayan tin mines in Japanese hands, Bolivia is the United Nations' chief source of this metal.

While tin had been mined during colonial and early republican years, it did not become economically important until just before 1900. Simón I. Patiño, one of the richest men in the world, was largely responsible. As a youth he worked in the mining center of Oruro and while still young acquired from a discouraged prospector the first of

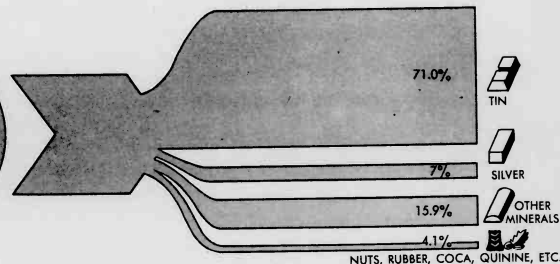
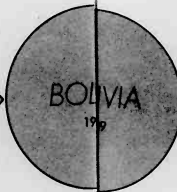
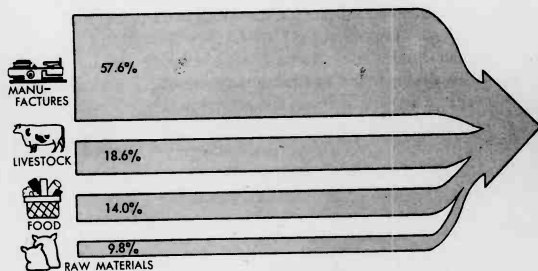
Monolithic image
at Tiabuanaco and
detail from gateway



his mines in the Potosí area. Patiño soon found a rich vein, but was not content for long to work it with primitive methods. Gradually he installed modern machinery and mining methods, took over new properties and developed power plants, mills, and railways. Today he controls Patiño Mines and Enterprises Consolidated, a company organized under Delaware laws. His interests own half of Bolivia's tin as well as a number of Malayan mines.

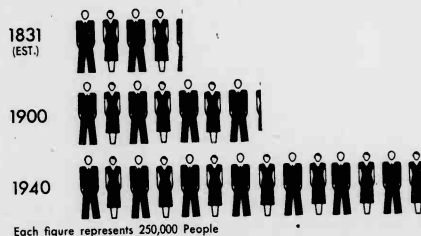
The peak of tin production was reached in 1929, when Bolivia's mines produced 46,000 metric tons. Production declined, partly due to competition with the tin of the East (a purer ore, more easily smelted), and partly because the cost of living so skyrocketed after the Chaco War that it was hard to get workers at prevailing wages. Because the tin mines are 13,000 to 15,000 feet above sea level, only the Andean Indians, with their tremendous lung development, can stand the labor. In 1942 Bolivia produced nearly 39,000 tons of tin, and is hoping to come near to the 1929 figure again.

Bolivia is the leading South American producer of tungsten, essential in the hardening of steel; her 1942 production was



NOTE: Imports amounted to \$21,500,000—Exports to \$39,500,000

POPULATION GROWTH



Each figure represents 250,000 People

3,363 tons. Antimony production was stepped up from 14,870 tons in 1941 to 17,642 in 1942; zinc from 6,065 to 10,099 tons. Sulphur also saw increased production, and although lead declined, Bolivia still mined 12,360 tons in 1942.

Bolivia has oil, too, although her 1942 production was only 10,000,000 gallons, most of this going to Argentina, under an agreement signed in 1941, by which Argentina was to construct a railroad from Yacuila to Santa Cruz de la Sierra.

In spite of this impressive production, Bolivia has not yet utilized to the fullest her mineral wealth—for the problem of transportation is ever present. Her thousands of miles of navigable lakes and rivers have played an important part in

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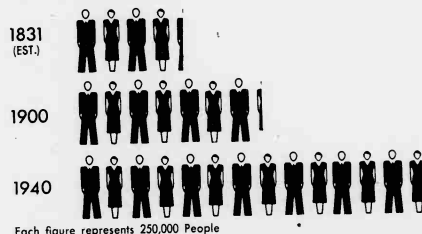


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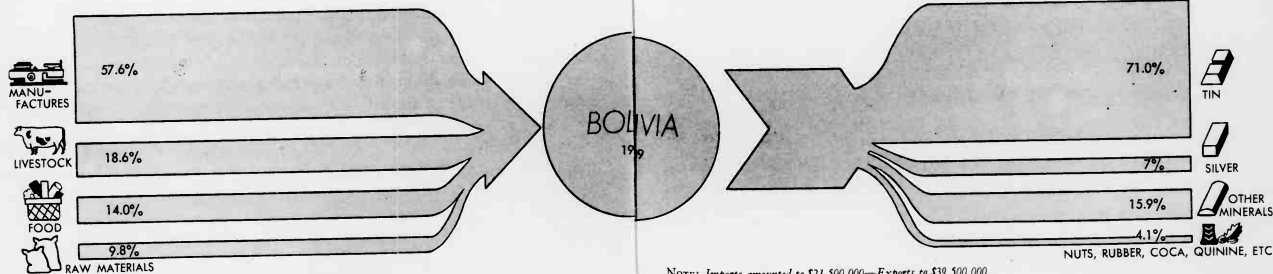
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transportation, especially the Mamoré River in the Beni and historic Lake Titicaca, highest steam-navigated lake in the world and largest lake in South America. Railroads, to reach the *Altiplano*, where lie Bolivia's important cities and her mines, must go over the backbone of the Andes, requiring difficult and expensive engineering and construction. Bolivian railroads connect with the ports of Arica and Antofagasto in Chile; Mollendo in Peru, and with Argentine lines leading to Buenos Aires. A railroad planned through Brazil has not been completed.

As in other Andean countries, the airplane is of supreme importance in solving Bolivia's transportation problems, although it must be supplemented by railroads and highways. Bolivia's first military air force was organized in 1924, and a year later a commercial route was established between Cochabamba and Santa Cruz, cutting to 3 hours the journey between these main trade centers of the highlands and the lowlands which by oxcart often required 7 weeks. Bolivian air lines, which were developed by German interests, were nationalized on May 14, 1941, and are now run under joint Bolivian and United States auspices. Bolivia's 4,117 miles of air lines connect with the main international lines.

Bolivia's elected President, General Enrique Peñaranda, was overthrown by a coup d'etat in December 1943, a few months before the end of his term. He had been elected in March 1940, and under the country's basic law the President, who serves four years, may not be re-elected immediately.

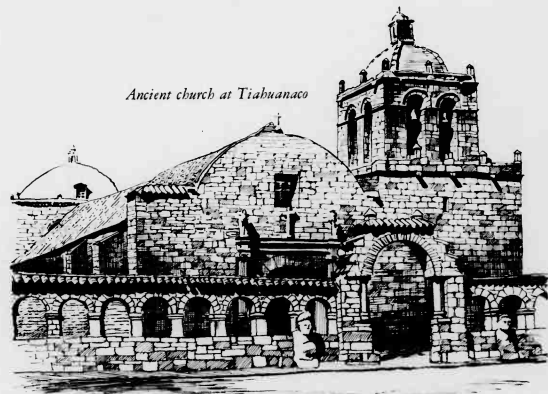
The Constitution of 1938 provided for collective bargaining, an 8-hour day and a 48-hour week, social security, compulsory insurance, and health supervision—in other words, a blueprint for a better world. Yet many of these provisions still have to be put into practice. Realizing this need, and alarmed at the Catavi tin mine strike of December, 1942, the Bolivian government invited labor specialists from the United States to join with its own in making a survey of working conditions.

The Ministry of Hygiene and Public Health has been working for several years on a comprehensive program of public

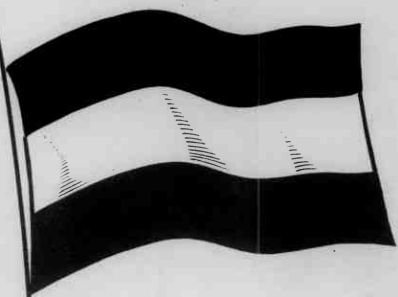
health, which includes preventive and curative control of tropical diseases; provision of adequate and safe water supplies (a real problem in many of the arid mining regions); general sanitary measures; and reduction of infant mortality, tuberculosis (augmented by the high incidence of silicosis in the mines), malnutrition and communicable diseases.

Education, too, is receiving renewed emphasis. Bolivia has 2,000 primary schools with 150,000 pupils, but education of children in mining regions and on the *haciendas* is still provided by the owners, a not too satisfactory condition according to the joint Bolivian-United States labor survey.

Twenty-seven secondary schools have an enrollment of more than 3,300 pupils, and the educational system includes three universities, those of La Paz, Sucre, and Cochabamba; an Institute of Commerce; a School of Mines; and a School of Native Languages. Under the Director General of Indian and Rural Education, stress is laid upon the education of the Indian, with particular attention paid to the trades and crafts.



Ancient church at Tiabuanaco



**END OF
TITLE**